

I claim:

1. A single protective layer for protecting a component against corrosion and oxidation at high temperatures, essentially consisting of:

0.5 to 2% wt of rhenium;

15 to 21% wt of chromium;

9 to 11.5% wt of aluminum;

0.05 to 0.7% wt of an element selected from the group consisting of yttrium, scandium and rare earths;

0 to 1% wt of ruthenium;

a remainder selected from the group consisting of cobalt and nickel; and

production-related impurities.

2. The protective layer according to claim 1, wherein:

the rhenium content is 1.5% wt;

the chromium content is 17% wt;

the aluminum content is 10% wt; and

a content of the element selected from the group consisting of yttrium, scandium, and rare earths is 0.3% wt, it being possible for contents listed to fluctuate in a manner customary in industrial production.

3. The protective layer according to claim 1, wherein the protective layer contains so few chromium-rhenium precipitations that there is no significant embrittlement of the protective layer.

4. The protective layer according to claim 3, wherein a volume of the chromium-rhenium precipitation is at most 6% by volume.

5. The protective layer according to claim 1, wherein a weight percentage of said cobalt is from 24 to 26.

6. The protective layer according to claim 5, wherein said weight percentage of said cobalt is 25.